IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. – 2. (canceled)

3. (previously presented) A circuit board, comprising:

a matrix material comprising:

a first layer woven from a first set of fibers; and

a second layer woven from a second set of fibers;

an optical fiber integrated with the matrix material; and

wherein the optical fiber is sandwiched between the first layer and the second layer and is not woven into either the first or second layers.

4. (original) The circuit board of claim 3, wherein the optical fiber is part of an optical fiber pattern with a plurality of optical fibers and the optical fiber pattern is between the first layer and the second layer.

5. (original) The circuit board of claim 4, wherein the optical fibers in the optical fiber pattern have preselected locations within the optical fiber pattern.

6. (original) The circuit board of claim 5, wherein the optical fibers in the optical fiber pattern are in a grid pattern with preselected spacings between the optical fibers that make up the grid.

7. – 19. (canceled)

20. (original) A method to form a printed circuit board, comprising:

PAGE 6/11 * RCVD AT 2/23/2006 4:24:13 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-5/12 * DNIS:2738300 * CSID:4087654087 * DURATION (mm-ss):02-54

forming a plurality of fiber bundles, each fiber bundle comprising structural fibers and at least one of the plurality of fiber bundles further comprising an optical fiber;

weaving the plurality of fiber bundles into a structural fabric;

impregnating the structural fabric with resin; and

curing the impregnated structural fabric to form the printed circuit board.

21. (canceled)

22. (original) The method of claim 20, wherein:

the cured impregnated structural fabric is a first layer of the printed circuit board; and

the printed circuit board has a plurality of layers.

23. (original) The method of claim 22, further comprising:

forming a stack that includes the first layer, a second layer, and a pattern of optical fibers between the first and second layers; and

curing the stack to form the printed circuit board, wherein the pattern of optical fibers are between the first and second layers in the circuit board.

24. – 25. (canceled)

26. (currently amended) ~~The method of claim 15,~~ A method to form a printed circuit board, comprising:

forming a stack that includes a first layer, a second layer, and a pattern of optical fibers between the first and second layers;

curing the stack to form the printed circuit board, wherein the pattern of optical fibers are between the first and second layers in the circuit board; and

wherein the optical fibers in the pattern of optical fibers between the first and second layers are not woven into a layer.

PAGE 7/11 * RCVD AT 2/23/2006 4:24:13 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-5/12 * DNIS:2738300 * CSID:4087654087 * DURATION (mm-ss):02-54